

## ABSTRACT

[0079] Embodiments of a cluster tool, processing chamber and method for processing a film stack are provided. In one embodiment, a method for *in-situ* etching of silicon and metal layers of a film stack is provided that includes the steps of etching an upper metal layer of the film stack in a processing chamber to expose a portion of an underlying silicon layer, and etching a trench in the silicon layer without removing the substrate from the processing chamber. The invention is particularly useful for thin film transistor fabrication for flat panel displays.